

## Comments on A GUIDANCE FOR THE APPLICATION OF THE UNFC-2009 FOR MINERAL RESOURCES IN FINLAND, NORWAY AND SWEDEN

### INTRODUCTION

This is a thoughtful document that raises several fundamental issues on mineral resources, many of which also apply to other commodities.

### COMMENTS

**Lines 19 and 21.** The word “appropriations” (“the action of taking something for one's own use, typically without the owner's permission”), is obviously not what is meant. Not sure of the appropriate word, but I think that it should be “Ownership” (see comment on Line 104).

**Line 104 et seq.** The concepts of resource “ownership” and “asset” need some clarification. A government usually owns an oil and gas or mineral resource, and an operator is granted a contractual right to extract and sell. Insofar as an operator has any ownership, it is of the contractual rights not of the resource.

**Lines 170 to 183.** The proposed UNFC E2.1 and 2.2 (equivalent to Attribute b and c respectively) have only been defined at a high level, yet, and a draft of Detailed guidelines is planned to be developed during the next year.

**Lines 179 to 180.** *Issues that cannot be influenced by stakeholders that are expected to be resolved in 179 the foreseeable future.* While I recognise the merit of this, I have some reservations about the “cannot be influenced by stakeholder” criterion, and think that this needs careful detailed guidance. For instance, although it may apply to something such as price, an operator may claim to be unable to influence a decision, but discussions with governments or lobbying (there are more lobbyists than Senators in Washington!) should be taken as evidence that they consider that issues CAN be influenced by a stakeholder.

**Line 184.** What constitutes a “source” should be defined. Is it the resource in the ground, the recovered volumes, the contractual rights ...?

**Line 189.** Does this refer to the mineral rights, the surface rights, or both?

**Line 190.** This refers to the “authority”, presumably an organisation with some legal powers. I suggest that the Local Community, which lies outside a formal legal process, should also be recognised since it can have a significant effect on the ability to carry out an extraction project.

**Line 267 et seq.** This depends on how you define a “project”. An example that I use is the Alberta oil sands, in which there are many operators, some of which have several different projects (geographically separated and /or different recovery processes – mining and SAGD). The government agency that looks at the oil sands has a broader view, and can even consider the whole of the Athabasca oil sands to be “project”. In fact, we do not evaluate and classify “projects”, but scenarios that represent the situation at a point in time, based on current information and forecasts of future conditions, and the same “project” can be evaluated under different assumptions (e.g., different prices). Repeated evaluations of the same project at different points in time (e.g., annually) allow them to be monitored.

**Line 309 et seq.** The following paragraphs refer to “aggregation”, which has always been problematic. Some oil and gas companies, for instance, evaluate individual properties at P60 in the confident knowledge that when all their properties are aggregated, they will meet the required P90 for reporting Proved reserves. Not necessarily wrong, but certainly problematic in preparing guidelines and setting standards. At the recent meeting of the SPEE Reserves Definitions Committee, I suggested that their next monograph should be on the issue of aggregation!

**Line 322.** Spatial, not special (see OED)

**Line 366.** Not sure that “discounted” is the right word, maybe “risked”.

**Line 375.** See comment on Lines 19 and 20 re “appropriation”.

Line 425. The term “Accounting” brings up visions of things like FASB, IASB, IFRS, GAAP, etc., and I suggest using “Resource Accounting”. What follows is what I would call a “Reconciliation”, that looks at changes in resource classification arising from evaluations carried out at different points in time. This has been done for Canadian oil and gas reported reserves since 2004 and is a valuable exercise.

**Line 489 Figure 6-1.** I find this confusing, and it needs a better explanation. For instance:

- The sum of the Initial quantity column is 310
- The sum of the Total quantity change column is 15
- The sum of the Final quantity change row is 321

I would have expected Final quantity = Initial quantity ± Total quantity change.

- For Class No.6, the Initial quantity is 10, changes sum to 1 + 1 + 4 = 6, but the Total quantity change is shown as 0.
- For Class No. 7 Initial quantity is 200, changes are shown as 20 (Commercial), but the Total quantity change is shown as 10.

I am obviously missing something, but I don’t know what!

**Line 507 et seq.** I have no issue with the general tenor of this section, but there are problems, particularly around the “aggregation” issue.

Line 510. The Law of Large Numbers:

- works for random events to converge to an expected value.
- an outcome is that if you aggregate enough individual estimates, you converge on zero variance, but I believe that, in reality, there is a minimal irreducible variance. (by analogy, although financial investment portfolio diversification works it doesn’t reduce variance to zero!).
- aggregating individual “proved” reserves estimates (whether P90 or P55) will not converge to an expected value (which is what the Law of Large Numbers says).

As noted for Line 309 et seq, I believe that the issue of aggregation is far from settled and could do with a SPEE Monograph (the general results of which would also apply to minerals).

**Line 519 to 521.** The UNFC Work Plan directive to consider the SDG and, especially, the Paris Climate Accord has significant implications. These are currently under consideration by the EGRC Social and Environmental Consideration Task Force, but it should be noted that climate change is seldom a factor considered in making decisions on the development of a specific resource.

**Line 593 et seq.** Capital Allocation. At the present time, I am not aware that the UNFC is used for operational decisions, including capital allocation. Although I believe that it has this potential, further development is needed

**Line 632 to 633.** The NYSE is the home of the larger oil and gas public companies, but even after the turndown in the industry, there are still more listed oil and gas on the Canadian exchanges, and there are also a large number on the ASX.

**Lines 646 to 648.** I agree but do not think that the SEC/FASB currently provides this.

**Line 728.** References. Suggest you add the Canadian oil and gas securities disclosure requirements, and supporting document, which contains considerable discussion beyond the basic disclosure requirements.

All available on the Alberta Securities Commission website

(([http://www.albertasecurities.com/industry/securities-law-and-policy/\\_layouts/Regulatory-Instruments/RegulatoryInstrumentDispForm.aspx?List=c425783b%2D0214%2D41e1%2Dbc6a%2D66e6766ff3aa&ID=104&Web=729da164%2D5e70%2D47a7%2Dbdea%2D6a26546e92e3](http://www.albertasecurities.com/industry/securities-law-and-policy/_layouts/Regulatory-Instruments/RegulatoryInstrumentDispForm.aspx?List=c425783b%2D0214%2D41e1%2Dbc6a%2D66e6766ff3aa&ID=104&Web=729da164%2D5e70%2D47a7%2Dbdea%2D6a26546e92e3)).

National Instrument 51-101 (NI 51-101) Standards of Disclosure for Oil and Gas Activities.

Form NI 51-101F1 Statement of Reserves Data and Other Oil and Gas Information.

Form NI 51-101F2 Report on [Reserves Data][,][Contingent Resources Data][And][Prospective Resources Data] By Independent Qualified Reserves Evaluator or Auditor.

Form NI 51-101F3 Report of Management and Directors on Oil and Gas Disclosure

Companion Policy 51-101 CP Standards of Disclosure for Oil and Gas Activities.

CSA Staff Notice NI 51-327 Guidance on Oil and Gas Disclosure.

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